IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:

Applicants:	Y. J. ASHER *et al.*	*Examiner*:	Leslie A. Wong
Serial No.:	09/834,253	*Art Unit*:	1761
Filed:	April 12, 2001	*Confirmation No.*:	2733
For:	CO-EXTRUDED CHEESE SNACKS		

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir or Madam:

This Appeal Brief is submitted in support of the Notice of Appeal filed January 30, 2007. A petition and fee for a three month extension of time is submitted herewith.

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I. REAL PARTY IN INTEREST

The Real Party in Interest on this Appeal is Sorrento Lactalis, Inc., 2375 South Park Avenue, Buffalo, New York 14220, by virtue of an Assignment dated March 30, 2001 from Yashavantkumar J. Asher, Pierre Nurit, Larry R. Pokojski, Sebastien Robert and Jean F. Falcetta to Sorrento Lactalis, Inc. (recorded at Reel 011695, Frame 0832).

II. RELATED APPEALS AND INTERFERENCES

There are no prior or pending appeals, interferences or judicial proceedings known to Applicants or the assignee which may be related to, directly affect or be directly affected by, or have a bearing on the Board's decision on this appeal.

III. STATUS OF CLAIMS

Claims 1 – 29 stand rejected under 35 U.S.C. § 103(a). No claims have been cancelled or withdrawn from consideration. The rejection of claims 1 – 29 is being appealed, and there are no other claims in this case.

A copy of the appealed claims is included in the Claims Appendix.

IV. STATUS OF AMENDMENTS

Applicants have not filed any amendments subsequent to the final office action of October 31, 2006.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Claims 1 and 16 are the only independent claims involved in the appeal.

The subject matter of claim 1 relates generally to a cheese snack having an inner flavoring core normally flowable at room temperature which is co-extruded within a natural cheese product, wherein the inner flavoring core does not leak or flow out of the cheese snack during processing. Claim 1 does not require stabilizers and does not limit the inner flavoring core to cheese or anything else. Dependent claims 3 and 14 cover non-cheese flavoring cores such as pizza sauce, salsa, peanut butter and fruit flavoring. Dependent claim 4 identifies a range of normal viscosity of the core. Claims 5 – 8 identify a core having flavoring, maltodextrine, starch or hydrocolloids in varied amounts. Claim 9 includes a cheese snack having an exterior coating. Claim 10 identifies a cheese snack wherein the core and surrounding cheese product are frozen for a time sufficient to prevent water in the core from migrating into the cheese product. Claim 11 identifies a cheese snack wherein the flavoring core includes a hydrocolloid in an amount sufficient to prevent the flavoring core from leaking out of the cheese product, and claims 12 and 13 identify a percentage by weight and varying types of hydrocolloids. Claim 15 identifies a cheese snack with a normal processing temperature.

Claim 16 claims a cheese snack having an inner flavoring core, wherein the inner flavoring core contains water and wherein the water does not migrate from the inner core to the surrounding annular natural cheese product. Claim 16 does not require stabilizers and does not limit the inner flavoring core to cheese or anything else. Dependent claims 18 and 28 include non-cheese flavoring cores such as pizza sauce, salsa, peanut butter and fruit flavoring. Claims 19 – 29 depend from claim 16 and correspond to similar claims depending from claim 1.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether the Examiner erred in rejecting Claims 1 through 29 for alleged obviousness under 35 U.S.C. §103(a) over U.S. Patent No. 5,194,283 (*Dupas et al.*) in view of U.S. Patent No. 5,709,900 (*Miller et al.*), U.S. Patent No. 5,807,601 (*Carpenter et al.*) and U.S. Patent No. 6,113,953 (*McMahon et al.*).

VII. ARGUMENT

A. Procedural History

This case was filed on April 12, 2001. A first office action rejecting all claims under 35 U.S.C. § 103(a) was issued on June 18, 2002, and the Applicants filed a response on December 17, 2002. A second office action rejecting all claims on the same basis was issued on March 18, 2003, and the Applicants' filed a Request for Continued Examination on September 9, 2003.

Following a third office action on September 24, 2003, a telephonic interview with the Examiner was held on February 7, 2004. During that interview, the Examiner suggested that Applicants amend the independent claims, claims 1 and 16, to include a temporal limitation with respect to the flow of the inner flavoring core from the cheese product and the migration of water from the flavoring core to the cheese outer layer, and agreed that such an amendment would place the claims in condition for allowance. A corresponding amendment was filed March 18, 2004.

On July 26, 2004, the Examiner issued a final office action which did not address the March 18, 2004 amendment in any manner. On August 26, 2004, a second telephone interview was conducted wherein the Examiner acknowledged that the July 26, 2004 office action may have been issued in error, *i.e.*, the Examiner acknowledged that she may have inadvertently issued the July 26, 2004 office action in response to the prior September 9, 2003 amendment (for which an office action had already issued), rather than the March 18, 2004 amendment. The Examiner stated that she would issue a new office action if that were the case.

No office action and no interview summary was issued, so Applicants' counsel contacted the Examiner on October 4, 2004. In response, the Examiner issued an Interview Summary,

mailed on November 16, 2004, stating that "[a] new action will be issued restarting the time period."

Two years later, on October 31, 2006, the Examiner issued a final office action which again rejected claims 1 – 29 under Section 103(a) on the same basis as in prior office actions.

B. Independent Claims 1 and 16 are Patentable over *Dupas et al.* in View of *Miller et al.*, *Carpenter et al.* and/or *McMahon et al.*

In the October 31, 2006 Final Office Action, the Examiner rejected claims 1 through 29 under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,194,283 (*Dupas et al.*) in view of U.S. Patent Nos. 5,709,900 (*Miller et al.*), 5,807,601 (*Carpenter et al.*), and 6,113,953 (*McMahon et al.*).

The Applicants respectfully submit that none of the prior art references, independently or in combination, refers to, teaches or suggests a product – a cheese snack – having an inner flavoring core *normally flowable at room temperature* wherein the core *does not leak or flow out* of the cheese snack when stored at room temperature, or wherein water within the inner core does not migrate from the core to the outer layer or coating. The references cited by the Examiner do not even address the problems of leakage or migration, nor do they motivate a person skilled in the art to solve these problems. In addition, there is no suggestion to modify the references or to combine them.

The Examiner's principal basis for rejection is that "the use of stabilizers in cheese products is well-known and within the skill of the art" and that the Applicants' claims differ from *Dupas et al.* only "as to the use of additional components." The independent claims, however, do not even require stabilizers. Moreover, stabilizers are claimed in the Applicants' invention (as

in dependent claims 5, 7, 11, 12, 13, 20, 22, 25, 26 and 27) with respect to a flavoring core, *e.g.* a non-cheese core like pizza sauce or salsa.

In addition, the prior art referenced by the Examiner teaches the use of stabilizers in processed cheeses (not in a natural cheese product as claimed by Applicants) for purposes other than that for which Applicants use maltodextrine, starch or hydrocolloids: (a) "to aid in improving the melting properties" and "control the moisture content" of the cheese (*see, e.g., McMahon et al.* at claims 1, 11, 20 and 31 and col. 3, lines 40 - 58, col. 6, lines 46-57), and (b) as "mimetics" to attempt to make imitation cheese feel and taste like natural cheese (*see, e.g., Carpenter et al.* at col. 2, lines 55-60, and *Miller et al.* at claim 1 and col. 1, lines 11-18). *Carpenter et al.*, in fact, teaches away from use of starches *as stabilizers* because they are too expensive (*see, Carpenter et al.* at col. 2, lines 19-33).

The cited references do not disclose or teach co-extruded products without (i) leakage from the ends of a cheese snack or (ii) water migration between the core and the outer cheese layer, nor do the references suggest the use of maltodextrine, starch or hydrocolloids to prevent such leakage or migration.

Claims 1 and 16 make clear that the outer layer of the cheese snack comprises a natural cheese, as opposed to a processed cheese. Because each of the secondary references (*Carpenter et al.*, *Miller et al.* and *McMahon et al.*) relate to processed cheeses, the claims further distinguish Applicants' invention from the prior art.

As set forth in the specification, the use of a stabilizing agent is significant in the Applicants' invention, in connection with a *natural cheese* product, to reduce water migration:

> it is critical to minimize migration of water and other solutes [between the core and outer cheese layer]. The coating, consisting of natural cheeses like cheddar and mozzarella, contains viable culture. Thus, their

> physicochemical properties will continue to change during refrigerated storage. The core is heat treated with a stabilizing agent to initiate activation and hydration of stabilizing agents.

(Application at page 7, lines 9-15). In the processed cheeses of the prior art, such water migration is not an issue and is not addressed.

Dupas et al., the primary reference and the only reference which discloses a co-extruded product, discloses a method by which leakage had been addressed prior to the Applicants' invention: use of a cup or container when a non-cheese core is co-extruded within a cheese outer layer. When a non-cheese core (*e.g.* strawberry pulp [Figs. 5, 6; col. 5, lines 36-40]; or tomato and tomato concentrate [Fig. 7; col. 5, lines 41-45]) is used, a "container" or "cup" is used [Figs. 5, 6, 7] to avoid leakage. Claim 11 of the *Dupas* patent confirms the need, in that invention, for a container or "vacuum wrapping" in the patented process when a non-cheese core is co-extruded within a cheese outer layer. Claim 1 of *Dupas et al.* (and dependent claims 2-10) defines a co-extruded product consisting of a *cheese core* with a different cheese layer about the core, and no cup, container or vacuum wrap is specified in those claims.

The Examiner states that the claims in the present application differ from *Dupas et al.* only as to the use of additional components. Significantly, however, co-extrusion in *Dupas et al.* is performed in a cold compression process at a temperatures of 0° to 30° C, and its claims are so limited (*see*, independent claims 1 and 11). Applicants' invention, by contrast, provides no such limitation, as core extrusion may be performed "using a conventional cooker-stretcher where cheese enters the extrusion device at temperatures on the order of 54-60°C, but sometimes as high as 75°." (Application at page 2, lines 23-25). "In the inventive process, . . . the curd is heated and kneaded with the aid of warm water and twin screws." (Application at page 5, line 32 through page 6, line 1). *Dupas et al.*, on the other hand, teaches cooling. "Conventional"

equipment, in a normal cheese operation, at normal operating temperatures, is used to produce the Applicants' cheese snack and this is reflected in the claims. Cold compression machinery operating at 0° to 30° C is not required. *Dupas et al.* does not disclose, suggest or teach the use of maltodextrine, starch or hydrocolloids to prevent leakage of a non-cheese core which is normally flowable at room temperature as claimed in dependent claims 3 and 18 herein. This is another principal problem which the Applicants' invention solves, as noted in the application: "Another object is to provide an improved composite cheese snack in which co-extruded flavoring core is formed within an outer annular cheese product such that the flavoring core will not substantially flow out of the exposed end face(s) of the snack when stored at room temperature." (Application at page 4, lines 1-4). This stated object contradicts the Examiner's statement that Applicants' invention obtains only "expected results."

The specification further confirms:

> This invention overcomes the problem of a relatively-fluid central core leaking out of the exposed end faces of a cheese snack. The technologies heretofore developed are believed to have failed to permit the use of softer more-fluid core materials, without leakage of the core material from the exposed end face(s) upon traverse cutting or slicing of the composite food product. In the prior art, the probability of core material leakage required that the core be completely encapsulated within an outer layer, or required extrusion of the product in to cup. The present invention permits co-extrusion and transverse cutting or severance of co-extruded masses having softer and more-liquid cores, without leakage of the core material from the exposed end face(s) of the cheese snack during further processing steps, including packaging. (Application at page 2, lines 13-22).

Nothing in the prior art even suggests a solution to the problem of leakage of a core normally flowable at room temperature. Simply put, the application discloses a product which had not been invented previously (together with the process by which it is made).

In addition, the reduction or elimination of water migration between the core and the outer cheese layer is not addressed by the prior art, nor is a solution to the problem suggested. Applicants' specification clearly states:

> The secondary purpose of stabilizing the core material is directed to managing water migration between core and outer coating. Each of the components (*i.e.*, core and coating foodstuffs) has unique functional and organoleptic properties. Therefore, it is critical to minimize migration of water and other solutes therebetween. To meet commercial requirements, products have to remain acceptable, judging by organoleptically and microbiological standards, for up to 120 days at storage temperatures of up to about 7°C. The coating, consisting of natural cheeses like cheddar and mozzarella, contains viable culture. Thus, their physicochemical properties will continue to change during refrigerated storage. The core is heat treated with a stabilizing agent to initiate activation and hydration of stabilizing agents.
>
> The freezing profile, energy-required-to-freeze, heat transfer and expansion/contraction coefficients of both core and coating materials are significantly different. To prevent the leakage of the low viscosity fluid core upon transverse cutting, the co-extruded strings should be cooled to a sub-zero temperature in few seconds . . . .

(Application at page 7, lines 7-20). It will be recognized by those skilled in the art that the 120-day period referred to above comprises packaging, shipping and all or a portion of a shelf-life period of a cheese snack. As stated above, the physiochemical properties of the cheese snack will continue to change during storage; however, prior to storage, water migration do not occur between the core and the outer cheese layer of the cheese snack. Such water migration is reduced for a period up to 120 days (to meet commercial requirements) or more. Thus, the problem of water migration between the core and the outer cheese layer, and the unexpected result of managing such water migration, are clearly described in the specification. Neither the problem nor the solution are taught or suggested by the prior art.

Thus, the Examiner has failed to provide any fact-specific analysis of the claims and the asserted prior art. Instead, the Examiner repeatedly asserts that "in the absence of a showing of unexpected results," the invention does not differ from the teachings of the prior art. However, an examiner's office action must explicitly address the *Graham v. John Deere Co.,* 383 U.S. 1, 148 USPQ 459 (1966), criteria for *prima facie* obviousness, and it does not. *See, In re Fine*, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

C. The Dependent Claims are Patentable Over the Cited Prior Art

The Final Office Action does not specifically address the individual dependent claims. For example, the Examiner does not cite to prior art with respect to the use of a non-cheese clavoring core as in claim 14, the viscosity identified in claim 4, the ranges of starch identified in claims 6 and 7, the exterior coating identified in claim 9, the freezing of the product as identified in claim 10, the use of hydrocolloids as identified in claims 11 – 13, or a cheese snack having a normal processing temperature as in claim 15. Similarly, the Examiner does not cite to prior art corresponding to claims 17 -29.

D. Conclusion

Based on the foregoing, the Applicants respectfully submit that the Examiner has not demonstrated a *prima facie* case of obviousness.

The problem of leakage from the end face(s) and the problem of water migration between the core and the outer cheese layer, and the unexpected results of managing such leakage and water migration, are clearly described in the specification. There is no teaching or suggestion in the prior art for the combination of characteristics claimed, nor does the prior art discuss any means of optimizing the claimed characteristics. The cited prior art does not disclose all the claimed characteristics of the co-extruded cheese snack, nor does it disclose or identify these

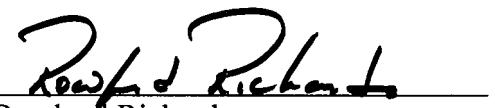
characteristics as being of the type that are desired, nor does it disclose the type of experimentation needed to accomplish Applicants' invention. Accordingly, it is respectfully submitted that Applicants' claimed invention would not have been obvious to one skilled in the art.

In summary, none of the prior art references discloses or suggests a cheese snack with a non-cheese core which does not leak at room temperature, and in which water does not migrate from the core. In addition, the secondary references teach the use of starch, maltodextrin, hydrocolloid stabilizers and gums *in cheese* for purposes *different from* those for which the Applicants use such compositions.

For the reasons set forth above, the Examiner's rejection of claims 1-29 should be reversed.

Respectfully submitted,

PHILLIPS LYTLE LLP

By 

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Dated: June 28, 2007

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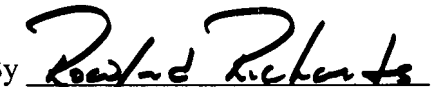
By 
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VIII. CLAIMS APPENDIX

Claim 1 (appealed): A cheese snack, comprising:

an extruded annular natural cheese product;

a flavoring core co-extruded within said natural cheese product, said core being normally flowable at room temperature, said product and core having substantially planar end faces with said core being exposed at said end faces; and

wherein said core does not substantially flow out of said natural cheese product during processing of said cheese snack prior to consumption.

Claim 2 (appealed): A cheese snack as set forth in claim 1 wherein said natural cheese product is selected from the group consisting of mozzarella, cheddar and Monterey Jack cheese.

Claim 3 (appealed): A cheese snack as set forth in claim 1 wherein said core is selected from the group consisting of pizza sauce, salsa, soft cheese, peanut butter and fruit flavoring.

Claim 4 (appealed): A cheese snack as set forth in claim 1 wherein said core has a normal viscosity of about 100-500 grams when measured by a Texture Profile Analyzer at room temperature before said cheese snack is formed.

Claim 5 (appealed): A cheese snack as set forth in claim 1 wherein said flavoring core contains at least one of the group consisting of flavoring, maltodextrine, starch and hydrocolloids.

Claim 6 (appealed): A cheese snack as set forth in claim 5 wherein said flavoring core contains up to about 1.5% starch.

Claim 7 (appealed): A cheese snack as set forth in claim 5 wherein said flavoring core contains up to about 3% maltodextrine.

Claim 8 (appealed): A cheese snack as set forth in claim 5 wherein said flavoring core contains pieces of flavoring material.

Claim 9 (appealed): A cheese snack as set forth in claim 1 and further comprising an exterior coating on said cheese product.

Claim 10 (appealed): A cheese snack as set forth in claim 1 wherein said cheese product and flavoring core are frozen for a time sufficient to prevent water in said core from migrating into said cheese product.

Claim 11 (appealed): A cheese snack as set forth in claim 1 wherein said flavoring core contains at least one hydrocolloid in an amount sufficient to prevent said flavoring core from leaking out of said cheese product but to prevent said core from drying out.

Claim 12 (appealed): A cheese snack as set forth in claim 11 wherein said one hydrocolloid is present in an amount equal to about 0.2-0.4% by weight.

Claim 13 (appealed): A cheese snack as set forth in claim 11 wherein said hydrocolloid is selected from the group consisting of guar, locust, xanthan, agar and carrageenan.

Claim 14 (appealed): A cheese snack as set forth in claim 1 wherein said flavoring core consists of non-cheese substances.

Claim 15 (appealed): A cheese snack as set forth in claim 1 wherein said cheese snack has a normal processing temperature.

Claim 16 (currently amended): A cheese snack, comprising:

an extruded annular natural cheese product;

a flavoring core co-extruded within said natural cheese product, said core containing water and being normally flowable at room temperature, said product and core having substantially planar end faces with said core being exposed at said end faces; and

wherein said water does not migrate from said core to said natural cheese product during shipping of said cheese snack.

Claim 17 (appealed): A cheese snack as set forth in claim 16 wherein said natural cheese product is selected from the group consisting of mozzarella, cheddar and Monterey Jack cheese.

Claim 18 (appealed): A cheese snack as set forth in claim 16 wherein said core is selected from the group consisting of pizza sauce, salsa, soft cheese, peanut butter and fruit flavoring.

Claim 19 (appealed): A cheese snack as set forth in claim 16 wherein said core has a normal viscosity of about 100-500 grams when measured by a Texture Profile Analyzer at room temperature before said cheese snack is formed.

Claim 20 (appealed): A cheese snack as set forth in claim 16 wherein said flavoring core contains at least one of the group consisting of flavoring, maltodextrine, starch and hydrocolloids.

Claim 21 (appealed): A cheese snack as set forth in claim 20 wherein said flavoring core contains up to about 1.5% starch.

Claim 22 (appealed): A cheese snack as set forth in claim 20 wherein said flavoring core contains up to about 3% maltodextrine.

Claim 23 (appealed): A cheese snack as set forth in claim 20 wherein said flavoring core contains pieces of flavoring material.

Claim 24 (appealed): A cheese snack as set forth in claim 16 and further comprising an exterior coating on said cheese product.

Claim 25 (appealed): A cheese snack as set forth in claim 16 wherein said flavoring core contains at least one hydrocolloid in an amount sufficient to prevent said flavoring core from leaking out of said cheese product but to prevent said core from drying out.

Claim 26 (appealed): A cheese snack as set forth in claim 25 wherein said one hydrocolloid is present in an amount equal to about 0.2-0.4% by weight.

Claim 27 (appealed): A cheese snack as set forth in claim 25 wherein said hydrocolloid is selected from the group consisting of guar, locust, xanthan, agar and carrageenan.

Claim 28 (appealed): A cheese snack as set forth in claim 16 wherein said flavoring core consists of non-cheese substances.

Claim 29 (appealed): A cheese snack as set forth in claim 16 wherein said cheese snack has a normal processing temperature.

IX. EVIDENCE APPENDIX

None.

X. RELATED PROCEEDINGS APPENDIX

None.